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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823,709

04/14/2004

Hiroyoshi Tsuruta

ED-US020438

5227

22919 7590 03/31/2008  
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EXAMINER

JOHNSON, MATTHEW A

ART UNIT

PAPER NUMBER

3682

MAIL DATE

DELIVERY MODE

03/31/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/823,709	<b>Applicant(s)</b> TSURUTA ET AL.	
	<b>Examiner</b> MATTHEW JOHNSON	<b>Art Unit</b> 3682	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 10-13 and 17-30 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-13 and 17-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/7/2008</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Prosecution Application***

1. The request filed on March 7, 2008 for Continued Examination (RCE) is accepted and a RCE has been established. An action on the RCE follows.

### ***Claim Objections***

2. Claims 1 and 17 are objected to because of the following informalities: the phrase "a damper mechanism elastically rotatably connecting..." is grammatically awkward. The examiner suggests the following language: -- a damper mechanism elastically and rotatably connecting --. Appropriate correction is required.

3. Claims 10, 11 and 21 are objected to because of the following informalities: Claims 10, 11 and 21 depend from cancelled claim 9. Appropriate correction is required.

4. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitations of claim 19 does not further limit amended claim 17 in terms of structure.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3682

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 10, 11, 17, 20, 21 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 and 11 recite the limitation "said inertia member" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 21 depends from claim 10 and is therefore also indefinite.

Claim 17 recites the limitations "said fix portion" in line 10 and "said inertia member" in line 11. There is insufficient antecedent basis for these limitations in the claim.

Re clm 20: Claim 20 depends from claim 1 and recites the limitation "said crankshaft has an annular protrusion". Claim 1 recites the limitation "an axially projecting protrusion of the crankshaft". In claim 20, it is unclear if Applicant is referring the protrusion previously recited in claim 1 or if Applicant intends to claim an additional protrusion.

Re clm 27: Claim 27 depends from claim 17 and recites the limitation "an inertia member". It is unclear if Applicant is referring to the inertia member recited in claim 17 (which lacks antecedent basis) or if Applicant intends to claim an additional inertia member.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5, 10-13, 20, 21, 23 and 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackel et al. (USP-6,213,270) in view of Fukushima (USP-4,842,116).

Re clm 1: Jackel discloses (embodiment of Fig. 2) a flywheel assembly comprising:

- A flywheel (3) having a clutch friction surface (9) frictionally engaging and disengaging a clutch disk (168, C9 L65-C10 L14)
- A damper mechanism (8) elastically rotatably connecting (Fig. 2) said flywheel to a crankshaft (shown in phantom lines, Fig. 2) of an engine
- A support member (15) supporting and positioning said flywheel on said crankshaft in a radial direction (C10 L39-50)

Jackel does not explicitly disclose the support member is supported in the radial direction by an axially projecting protrusion of the crankshaft.

Fukushima teaches a crankshaft (30) having an axially extending protrusion (supporting 37a, Fig. 1) that supports a support member (37a) in the radial direction for the purpose of supporting and centering the support member on the crankshaft.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the crankshaft of Jackel to include an axially extending protrusion, as taught by Fukushima, for the purpose of supporting and centering the support member on the crankshaft.

Re clm 2: Jackel further discloses said flywheel is formed with an inner circumferential surface (near 4, Fig. 2) and said support member is formed with an outer circumferential surface (near 6, Fig. 2) opposing said inner circumferential surface in the radial direction.

Re clm 3: Jackel further discloses said support member has a cylindrical support portion (near 6, Fig. 2) having said outer circumferential surface.

Re clm 4: Jackel further discloses a radial bearing (6) disposed between said outer circumferential surface of said support member and said inner circumferential surface of said flywheel (Fig. 2).

Re clm 5: Jackel further discloses said radial bearing is composed of a cylindrical member (outer race of 6).

Re clm 10: Jackel further discloses a fix member (19) that fixes said support member and an inertia member (2) to said crankshaft.

Re clm 11: Jackel further discloses said support member contacts said inertia member to center said inertia member in the radial direction (Fig. 2).

Re clm 12: Jackel further discloses said support member has a fix portion (18) to be fixed to a tip of said crankshaft (Fig. 2).

Re clm 13: Jackel further discloses said fix portion is an annular flat disk-like portion (Fig. 2) and said support portion extends in the axial direction from an edge of said fix portion (Fig. 2).

Re clm 20: Jackel discloses all of the claimed subject matter as described above.

Jackel does not disclose said crankshaft has an annular protrusion having an outer circumferential surface, which supports an inner circumferential surface of said support member.

Fukushima teaches a crankshaft (30) having an annular protrusion (supporting 37a, Fig. 1) having an outer circumferential surface, which supports an inner circumferential surface of a support member (37a) for the purpose of supporting and centering the support member on the crankshaft.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the crankshaft of Jackel to include an annular protrusion having an outer circumferential surface, which supports an inner circumferential surface of said support member, as taught by Fukushima, for the purpose of supporting and centering the support member on the crankshaft.

Re clm 21: Jackel further discloses said fix member is a bolt (Fig. 2).

Re clm 23: Jackel further discloses an inertia member (2, 14) separately formed from said support member, wherein said support member has a fix portion (18) fixed to a tip of said crankshaft (Fig. 2), and a support portion (bearing surface on 15) extending in an axial direction from an edge of said fix portion (Fig. 2), and said fix portion is axially arranged between said crankshaft and said inertia member, and said inertia

member is axially arranged between said fix portion and said damper mechanism (Fig. 2).

Re clm 24: Jackel further discloses said fix portion contacts said crankshaft (Fig. 2).

9. Claims 1, 23 and 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackel et al. (USP-6,213,270) in view of Fukushima (USP-4,842,116).

Re clm 1: Jackel discloses (embodiment of Fig. 12) a flywheel assembly comprising:

- A flywheel (903) having a clutch friction surface (right surface of 903, Fig. 12) frictionally engaging and disengaging a clutch disk (Fig.12)
- A damper mechanism (908) elastically rotatably connecting (Fig. 12) said flywheel to a crankshaft (shown in phantom lines, Fig. 2) of an engine
- A support member (904) supporting and positioning said flywheel on said crankshaft in a radial direction (Fig. 12, C29 L64-66 and C10 L39-50)

Jackel does not explicitly disclose the support member is supported in the radial direction by an axially projecting protrusion of the crankshaft.

Fukushima teaches a crankshaft (30) having an axially extending protrusion (supporting 37a, Fig. 1) that supports a support member (37a) in the radial direction for the purpose of supporting and centering the support member on the crankshaft.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the crankshaft of Jackel to include an axially



extending protrusion, as taught by Fukushima, for the purpose of supporting and centering the support member on the crankshaft.

Re clm 23: Jackel further discloses an inertia member (902) separately formed from said support member, wherein said support member has a fix portion (portion corresponding to 18 in Fig. 2) fixed to a tip of said crankshaft, said fix portion being an annular flat disk-like portion, and a support portion (bearing surface on 904) extending in an axial direction from an edge of said fix portion (Fig. 12), and said fix portion is axially arranged between said crankshaft and said inertia member, and said inertia member is axially arranged between said fix portion and said damper mechanism (Fig. 12).

Re clm 24: Jackel further discloses said fix portion contacts said crankshaft (Fig. 12).

10. Claims 17-19, 22 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackel et al. (USP-6,213,270) in view of Fukushima (USP-4,842,116) further in view of Maucher et al. (USP-4,732,250).

Re clms 17-19 and 22: Jackel discloses (Fig. 12) a flywheel assembly comprising:

- A flywheel (903) having a clutch friction surface (right surface on 903) frictionally engaging and disengaging a clutch disk (Fig. 12)
- A damper mechanism (908) elastically rotatably connecting (Fig. 12) said flywheel to a crankshaft (shown in phantom lines, Fig. 2) of an engine,

said damper mechanism including an input member (922) attached to said crankshaft (via 919, C30 L3-9)

- A support member (904) supporting and positioning said flywheel on said crankshaft in a radial direction (C29 L64-66 and C10 L39-50)
- Said input member being independent of and separate from said support member, a fix portion (portion in Fig. 12 corresponding to 18 of Fig. 2) being axially arranged between said crankshaft and an inertia member (902), and said inertia member being axially arranged between said fix portion and said input member (Fig. 12)
- A fix member (919) to fix said support member and said input member to said crankshaft.

While Jackel does indeed disclose that the input member (922) is clamped between the bolt (919) and the inner wall of the inertia member (902, C30 L3-9), Jackel does not explicitly disclose an inner circumferential surface of the input member contacts an outer circumferential surface of the support portion.

Maucher teaches (Fig. 3) an input member (18') has an inner circumferential surface that contacts an outer circumferential surface of a support portion (23') of a support member (29') for the purpose of supporting and centering the input member.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the device of Jackel such that an inner circumferential surface of the input member contacts an outer circumferential surface of

the support portion, as taught by Maucher, for the purpose of supporting and centering the input member.

Re clm 25: Jackel in view of Fukushima disclose all of the claim limitations as described above.

Jackel discloses an inner circumferential surface of said inertia member contacts an outer circumferential surface of said support portion (Fig. 12). While Jackel does indeed disclose that the input member (922) is clamped between the bolt (919) and the inner wall of the inertia member (902, C30 L3-9), Jackel does not explicitly disclose an inner circumferential surface of the damper mechanism contacts an outer circumferential surface of the support portion.

Maucher teaches (Fig. 3) a damper mechanism (26') has an inner circumferential surface (inner surface of 28') that contacts an outer circumferential surface of a support portion (23') of a support member (29') for the purpose of supporting and centering the damping mechanism.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the device of Jackel such that an inner circumferential surface of the input member contacts an outer circumferential surface of the support portion, as taught by Maucher, for the purpose of supporting and centering the input member.

Re clm 26: Jackel further discloses said inertia member includes a disk member (962) and an annular member (near 902, Fig. 12) fixed to a radially outer end of said disk member.

Re clm 27: Jackel further discloses an inertia member (902) being separately formed from said support member, said support member has a fix portion (portion in Fig. 12 corresponding to 18 of Fig. 2) being fixed to a tip of said crankshaft (Fig. 12), said fix portion being an annular flat disk-like portion (Fig. 12), and a support portion (bearing surface of 904) extending in an axial direction from an edge of said fix portion (Fig. 12), and said fix portion is axially arranged between said crankshaft and said inertia member, and said inertia member is axially arranged between said fix portion and said input member (Fig. 12).

Re clm 28: Jackel further discloses said fix portion contacts said crankshaft (Fig. 12).

Re clm 29: Jackel further discloses inner circumferential surfaces of said inertia member (inner surface of 902) and said input member (inner surface of 922a) contact an outer circumferential surface of said support portion (Fig. 12, C30 L3-9).

Re clm 30: Jackel further discloses said inertia member includes a disk member (962) and an annular member (near 902, Fig. 12) fixed to a radially outer end of said disk member.

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1 and 17 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW JOHNSON whose telephone number is (571)272-7944. The examiner can normally be reached on Monday - Friday 8:30a.m. - 5:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J./  
Examiner, Art Unit 3682

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/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3682